# Zcientific American.

THE ADVOCATE OF INDUSTRY, AND JOURNAL OF SCIENTIFIC, MECHANICAL AND OTHER IMPROVEMENTS.

bol. 4.

New York, June 2, 1849.

No. 37.

THE

#### Scientific American.

THE
BEST MECHANICAL PAPER IN THE WORLD.
CIRCULATION 12,000.

PUBLISHED WEERLY.

At 128 Fulton Street, New York (Sun Building.) and
13 Court Street, Boston, Mass.

By Munn & Company.

The Principal Office being at New York
Berlow & Payne, Agents, 89 Chancery Lane, London

TERMS---\$2 a year--\$1 in advance, and the remainder in 6 months.

# Poetry.

#### THE APRIL SHOWER.

BY CHARLES G. MACKAY.
Silently upon the earth
Falls the April shower,
Heralding the leaflets birth,
And the budding flower,
And the grass within the vale,
And the violet blue
Gladly tell the blithstometale—
Spring hath come anew,

The vines that deck the garden wall,
Bless the April shower,
The springing plants both great and small,
Smile when skies do lower,
And the willows by the stream:
Silvery buds do show;
All looks like a fairy dream,
Where but late was snow.

Gladness to the maiden's heart,
Brings the April shower,
Thinking as the buds do start,
Of her latticed bower,
'Tis a joyous thought to one,
Pining to be free,
That the cold, dark storms are gone,
From the lake and sea.

Smilingly old Nature looks,
In an April shower;
Joyously the rippling brooks,
Chant the livelong hour,
'Tis a time of smiles and tears,
Hopes and budding flowers—
Like the tears of early years,
Are the April showers.

Abou Ben Adhem and the Angel.

Abou Ben Adhem (may his tribe increase!)
Awoke one night from a deep dream of peace,
And saw, within the moonlight in his room
An angel, writing in a book of gold:
Exceeding peace had made Ben Adhem bold,
And to the presence in the room he said,
"What writest thou?" The vision raised its
head,

And, with a smiling look of sweet record,

Answered. The names of those who love the

Lord.

"And is mine one?" said Abou--" Nay not

Replied the angel. Abou spoke more low,
But cheerly still, and said, "I pray thee, then,
Write me as one who loves his fellow men."
The angel wrote and vanished. The next night
It came again with a great wakening light,
And showed the names whom love of God had
blest,

And lo! Ben Adhem's name led all the rest!

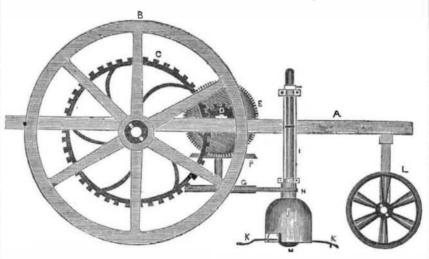
The Button.

John, who is always too punctilious,
Got up one morning rather bilious,
And thus began to scold:

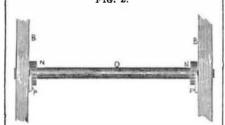
"Say, where's that button? you're a wife
To worry out a fellow's life—
How oft must you be told?"
But, madam, with a ready wit,
That cured her spouse's angry fit,
Cried, "dearest do not scoff
About that little button, John—
I really meant to put if on—

But then I-put it off."

GRASS CUTTING MACHINE .--- Figure 1.



This machine is the invention of Mr. Wm. P. Vickery, of Danville, Goff's Corner, Me., who has applied for a patent. Fig. 1 is a side elevation and fig. 2 is a front view of the palls which gear the cutting machinery with the driving wheels of the wagon. The same letters indicate like parts on both figures. A, is one of the side poles or tram of the cartone horse being sufficient to operate it. B. are the wheels, from the axles of which, as it is drawn forward, motion is communicated to the rest of the machinery. C, is a large toothed wheel on the shaft O, fig. 2. D, is a pinion on a transverse shaft placed between the two sides of the cart frame. The wheel C, meshes into D, and gives motion to the shaft



on which it is secured, which has a large bevel wheel E, secured upon it near the opposite side. This bevel wheel E, gears into a bevel pinion F, on a small vertical shaft projecting downwards and secured in a proper

pulley on this small vertical shaft from which passes a band around H, a small pulley or drum on the vertical cutter shaft I. This shaft is secured in proper suspension bearings attached to the nigh side of the pole A. On the lower end of this shaft I, is the cylinder or scythe stock J. Near its lower surface are secured one or more scythes II K, which can be taken out and put in easily. M, is a small friction wheel secured on the lower end of the spindle or shatt I, which by rolling on the ground or over stones raises up the shaft and scythes, thus accommodating the cutting parts to uneven ground, &c. L, are two guide wheels. They are secured on a central vertical spindle intersecting a small cross axlethey therefore turn on the vertical spindle like a swivel to guide the large wheels. The large wheels B, run loose on the shaft O, as represented in fig. 2. Upon the inside of the large wheels are two ratchet wheels N N, firmly secured to the axle. PP, are two clicks or palls united by pivots to the inside of the wheels B B. These palls catch into the ratchet wheels when the cart is drawn forward and thus the wheels B B, and the scythe gearing are geared together. But when the cart is pushed back the ratchets run over the teeth of the ratchet wheels and no motion is communicated to C, the large cog wheel.

suspension bearing on the other beam A, on

the opposite side of the cart. G, is a grooved

# High and Low Classes

The following is from the Philadelphia Ledger. It is to the point, correct and frank.

A high and low class" certainly do exist in all cities. But who constitute the high class? Why the orderly, the sober, the quiet the law loving and the peace-preserving citizens, without reference to rich or poor. Were it otherwise, society could not hang together for an hour. Who constitute "the low class' but the law-breakers, the peace-disturbers, the riolous, the brawling inebriates and the incorrigible loafers. Not the poor, for there are at least as many poor among the sober and quiet portion of the community, as rich. The distinction of " high and low," in classes, when properly defined, involves no invidious sorcasm, ignominious degradation on the Who constitute the police? The poor. Who make up the ranks of the militia? The poor. If the Sheriff calls out his posse commitatus, who obeys the call? Not the rich but the poor. Who fight the battles of the country in war? The poor. Who produce property, and then protect it, but the poor? We have but two classes, the idle and the industrious, and the latter only discharge all the duties of good citizens.

Since the year 1810, 1,400 persons have been executed in England, for crimes which are no longer capital.

#### Course of Trade.

The Troy (N. Y.) Daily Whig notices as an interesting fact, the receipts by lake at Oswego, on the 17th instant, of 38 hhds. of sugar by the Mississippi lake route:

The first shipment of sugar from the Missisippi, via Oswego, it says, was made last season it being a small invoice for Syracuse. The first shipment of cotton for the New York market from the South, we believe, also took place last season. Considerable quantities are now coming forward by that route, as also hemp from Kentucky. The opening of the Chicago and Illinois Canal has created an important revolution in trade, so far as sugar and molases are concerned. Instead of making their purchases at New York and Philadelphia, the dealers on lake Michigan (who now make their chief purchases at St. Louis. Southern sugar, by way of Cincinnati and Toledo, for two or three years has competed with the seaboard-purchased article in Buffalo and in all the upper lakes ports the trade from that direction is considerable. These things have not a little effect on "up freight" business propellers and vessels on the lake.

Germany is now engaged in the gigantic project of uniting the North and the Baltic seas. It can be done without locks.

RAILROAD NEWS.

#### Railway Jobbing in England.

On the 1st inst. Lord Brougham delivered in the House of Peers a philippic against the Railway system, the projectors, and all concerned. He denounced the gambling mania which gave vast powers to railway companies to promote the interest of a few, who did not care a straw if an inch of railroad was ever made, but whose object was to make plans and attorneys' bills, and the class of traffickers who erected princely fortunes on the ruin of private persons. In one session 519 railway bills were passed, and before five years Britain had invested nearly \$800,000,-000 in railway stock, paid up, while \$742,-000,000 remained due and payable. He instanced cases of knavery, and also of false balances made to deceive. Mr. Sanders, Secretary of the Great Western Railway Company, who had a salary of \$14,850 a year, was in arrears for calls on his shares \$80,000, while a poor widow was pounced upon the moment an instalment was due. A solicitor to the same company had also received \$900,000 for land purchased by the company, though he had not produced a single deed. He had not a cent, but had not been sued lest the shares would come down! He named preference shares as another feature in the system of fraud, and explained the mode of manufacturing them. The Secretary and the Solicitor to whom he had alluded held preference shares. So long as they thought the shares good, and nocalls were made upon them, they never dreamed that there was anything illegal or fraudulent in them; but the moment a call was made, they repudiated the shares .-His Lordship next charged Members of the House of Commons with having been bribed, either in money or shares, to expedite the passing of railway bills-stating that as much as £24,000 had been offered in one instance, and that by the judicious application of such monies, nothing was more easy than to bring down half a dozen members or more to vote upon a question which they had never heard debated. Not long since, the House of Commons had rejected a very stringent measure for the suppression of bribery. The only effectual means to prevent fraud and imposture, was to insist upon an absolute, unqualified, unsparing publicity to all railway transac-

### Narrow Escape of a Railroad Train.

The Boston Express came very near being thrown into the river, at New Haven, on Thursday of last week. Between 10 and 11 o'clock the locomotive ran off the track on the New Haven bridge, and was within two feet of going over, when its progress was happily arrested, and the lives of some hundred passengers preserved. After all danger had passed, the passengers became aware of their providential escape. Had they known their danger sooner, many would probably have rushed out of the cars and incurred more serious risks than that which they escaped from.

portant revolution in trade, so far as sugar and molases are concerned. Instead of making their purchases at New York and Philadelphia, the dealers on lake Michigan (who supply the back country in a wholesale way) now make their chief purchases at St. Louis foreman.

# Erie Canal Steam Navigation.

The Central City (Syracuse,) says that a stout Canal boat with a load of 80 tons, propelled by steam, passed through that city last week going at good packet speed. It was propelled by a central wheel near the stern, of two feet in diameter. Canal steam navigation is not a new thing we believe on the Erie Canal, and far from being new on the Pennsylvania Canals.